USB to DVI-I Graphics Adapter
CSV-2300D

USER'S MANUAL

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This manual is designed for use with the USB 3.0 to DVI Adapter. Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. The manufacturer does not make any representations or warranties (implied or otherwise) regarding the accuracy and completeness of this document and shall in no event be liable for any loss of profit or any commercial damage, including but not limited to special, incidental, consequential, or other damage.
Before attempting to connect, operate or adjust this product, please save and read the User's Manual completely. The style of the product shown in this User's Manual may be different from the actual unit due to various models.

Safety instructions

Always read the safety instructions carefully:

- Keep this User’s Manual for future reference
- Keep this equipment away from humidity
- If any of the following situation arises, get the equipment checked by a service technician:

• The equipment has been exposed to moisture.
• The equipment has been dropped and damaged.
• The equipment has obvious sign of breakage.
• The equipment has not been working well or cannot get it to work according to the User’s Manual.

Copyright

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Introduction

The USB 3.0 Display Adapter is a device which enables connection to second display device to a computer using USB 3.0 port. With this convenient design, it can connect up to 6 display devices to a computer without installing extra video cards. Once the driver has been installed, the USB attached monitor will be enabled immediately. No function key on the adapter and there is no need to reboot the operating system after unplugging the USB adapter. System performance is an important issue when using multiple monitors. Another benefit of this adapter is that it occupies little computer resource; ensuring users get quality display without comprising computer performance.

Features

- Add-on monitor, LCD or projector through a single USB 3.0 port hot-plug; add or remove monitor without system reboot
- Small in size, works with all DVI-I displays.
- Supports High Resolution up to 2048x1152
- Video streaming is supported up to 1080p
- Extend and Mirror mode support.
- Resumes from hibernation and suspend modes
- Supports up to 6 USB display adapters to work simultaneously

Application

Office workstation

- View your large spreadsheets across two screens with display continuity
- Multitask more effectively without overlapping windows
- Edit on one screen while surfing the Internet information on the other

On the road

- Do multiple screen presentations without bringing another computer
- Easily provide multiple screen exhibitions in a trade show

Graphics workstation

- Use second display for palettes/tools
- Get a panoramic view of large documents

Editing workstation

- Type documents on one screen while viewing reference material on the other
- Compare two documents simultaneously across two screens

Financial analysis

- Have one monitor per data stream
- View charts and live data at the same time

Entertainment

- View videos/TV on one screen and reviews on the other
- Get additional perspectives when playing games

Package contents

- USB 3.0 to DVI Adapter x1
- CD (Driver & User's Manual) x1
- USB cable x1

System requirement

Hardware

▪ The minimum requirements for the PC are:
- With Single Core CPU at 1.2GHz or higher processor clock. Intel® Pentium®/Celeron® family, or AMD® K6® /Athlon®/Duron® family, or compatible processor
- 512MB memory
- At least one USB3.0 port (*)
- 30Mb of available disk space
- Super VGA (800 x 600) or higher resolution monitor

*Note: Although this adapter supports to connect to a USB 2.0 connector, the quality might be poor under high resolution display condition. In addition, this adapter does not support USB 1.0/1.1.

▪ To play DVD on the adapter-attached monitor, except the requirements above, the following requirements should also be met:
- With dual core CPU at 2.0 GHz processor clock
- The adapter screen resolution be set to 800x600 with 32bit color. It is recommended to close all other unnecessary applications if the video playback is not smooth.

▪ For 1-2 monitors, business usage, productivity target. This may not provide full frame rate DVD playback at full screen.
- 1.2GHz Single Core CPU
- 512MB memory

▪ For 3 monitors, where 1 could run DVD video while also targeting productivity and business apps. Will support only 1 video of DVD resolution at full screen
- 1.6GHz CPU
- 1GB memory

▪ For 6 screen where 1 screen can run full screen DVD video
- 1.8GHz Core Duo
- 1GB memory

Software

▪ Windows® XP Home or Professional (Including Table edition) SP2 or SP3

*Note: This adapter does not support Windows® XP 64bit

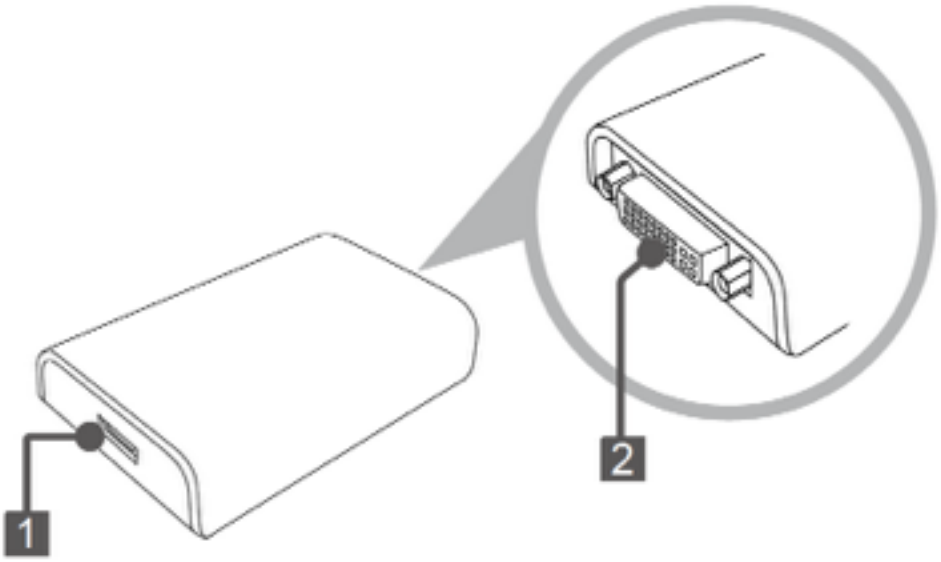
▪ Windows® Vista SP1/SP2 (32-bit or 64-bit)

▪ Windows® 7 (32-bit or 64 bit)

▪ Windows® 8

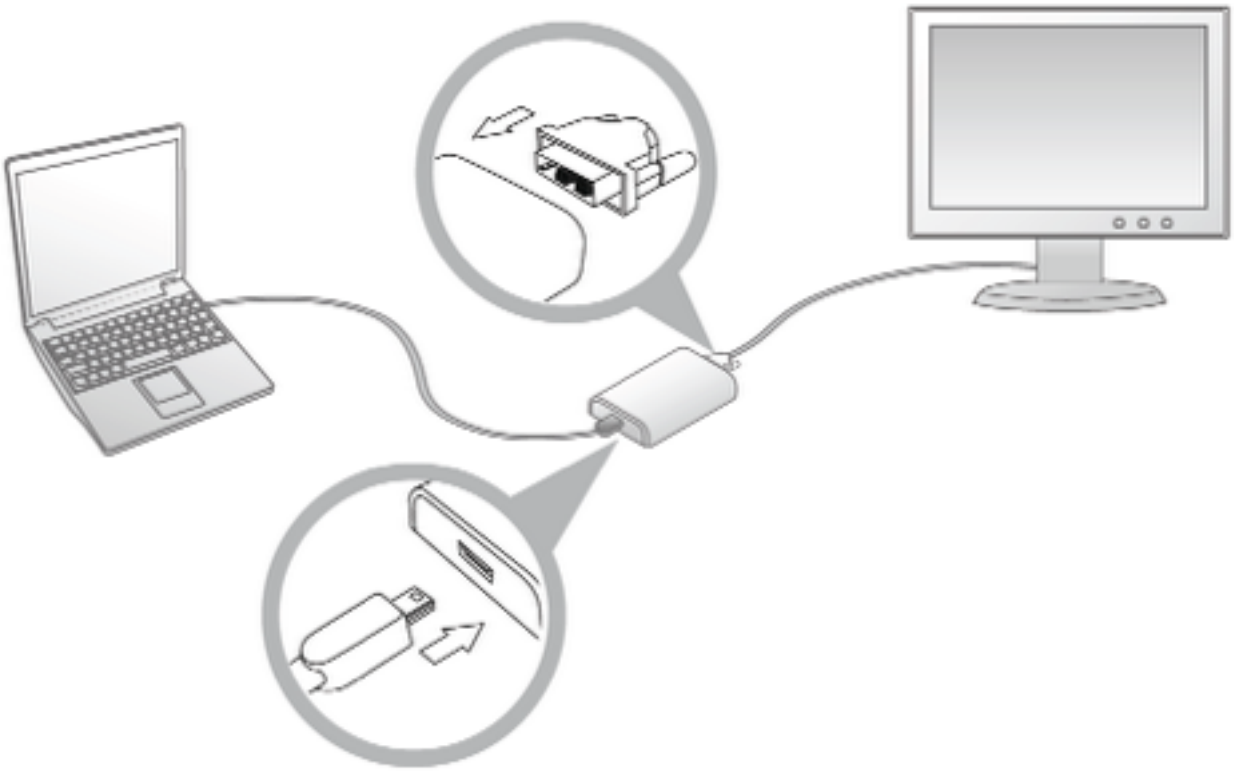
Parts and connection

Parts



1 Micro USB connector: Connect to an available USB connector on a computer.
2 DVI connector: Connect to a desired DVI monitor. To connect different types of monitor, you may need a converter.

Connection

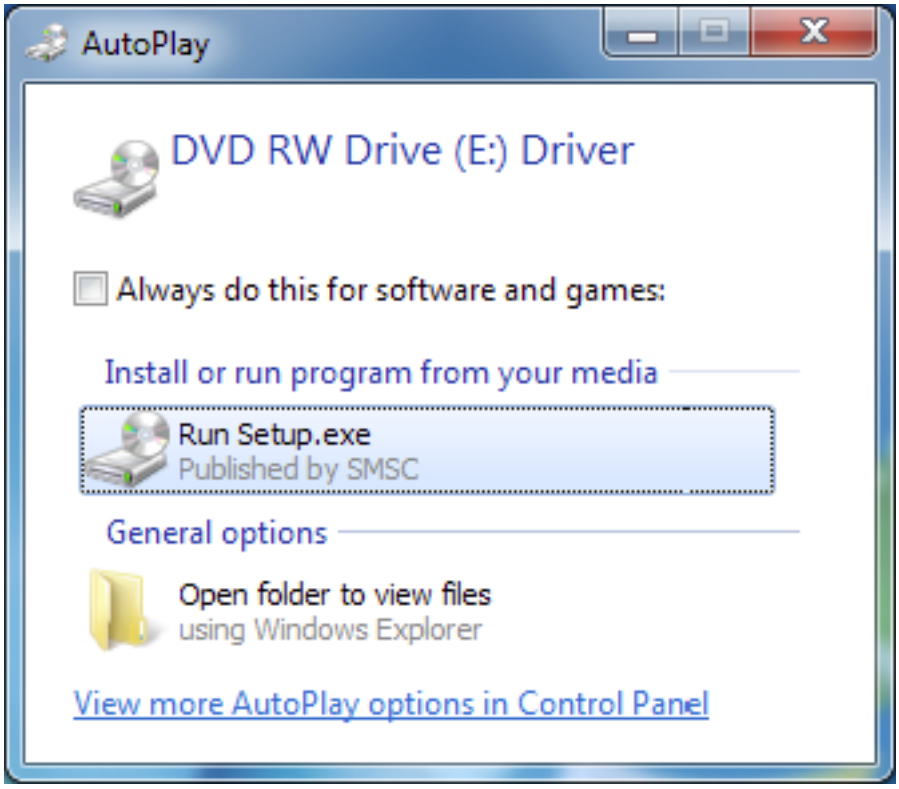


1. Plug one end of DVI cable into the adapter's DVI connector, and the other end of DVI cable into a DVI connector of monitor.
2. Plug the micro USB connector into the adapter's micro USB connector and the other end into a PC.

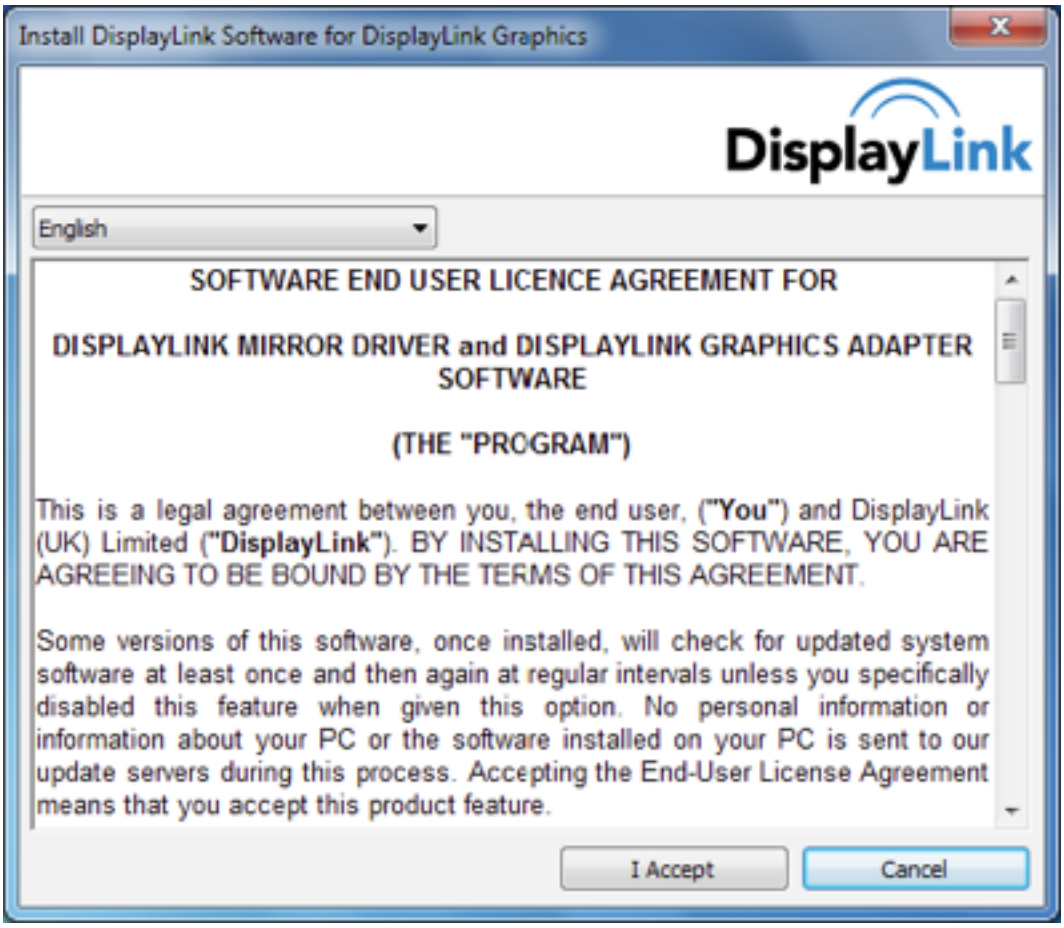
Installation

Caution: DO NOT connect the USB 3.0 to DVI Adapter
to a computer before installing the provided driver.

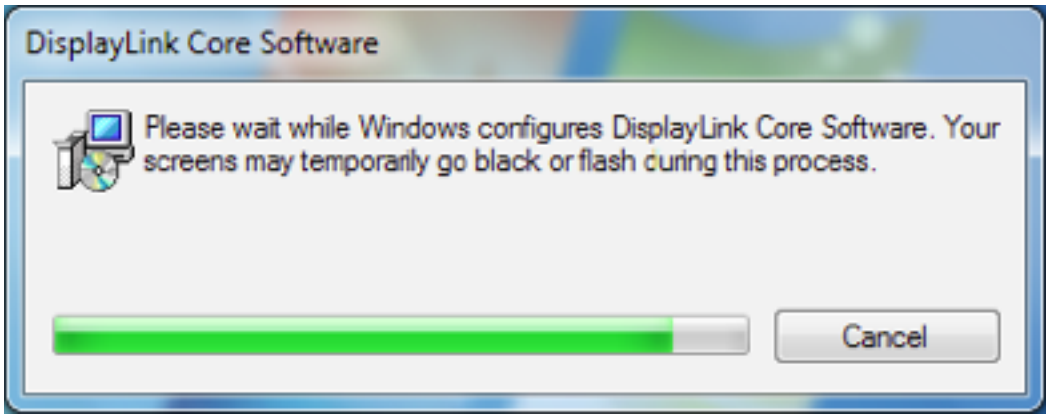
Note that the following strings and screen shots shown on
this user's manual may vary slightly from each operation.
For Windows® 7/ Windows® 8 users
1. Insert the supplied driver CD into a computer's CD/DVDROM.
2. Click <Run Setup.exe> to start the installation.


AutoPlay
DVD RW Drive (E:) Driver
Always do this for software and games:
Install or run program from your media
Run Setup.exe
Published by SMSC
General options
Open folder to view files
using Windows Explorer
View more AutoPlay options in Control Panel

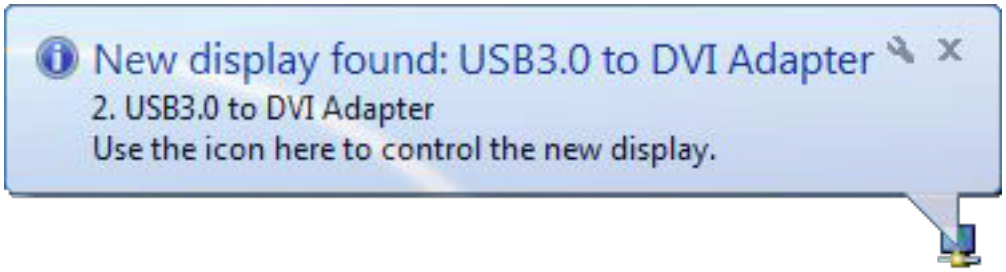
Note:
If the AutoPlay does not appear automatically, locate and double-click on the Setup.exe file in the driver folder to launch the setup.
Enter the administrator password and then click <Yes> to start the installation if a User Account Control dialog box appears.
3. Click <I Accept> for the next step.


Install DisplayLink Software for DisplayLink Graphics
DisplayLink
English
SOFTWARE END USER LICENCE AGREEMENT FOR
DISPLAYLINK MIRROR DRIVER and DISPLAYLINK GRAPHICS ADAPTER SOFTWARE
(THE "PROGRAM")
This is a legal agreement between you, the end user, ("You") and DisplayLink (UK) Limited ("DisplayLink"). BY INSTALLING THIS SOFTWARE, YOU ARE AGREEING TO BE BOUND BY THE TERMS OF THIS AGREEMENT.
Some versions of this software, once installed, will check for updated system software at least once and then again at regular intervals unless you specifically disabled this feature when given this option. No personal information or information about your PC or the software installed on your PC is sent to our update servers during this process. Accepting the End-User License Agreement means that you accept this product feature.
I Accept
Cancel

4. Be patient with the installation procedure, it may take a while.


DisplayLink Core Software
Please wait while Windows configures DisplayLink Core Software. Your screens may temporarily go black or flash during this process.
Cancel

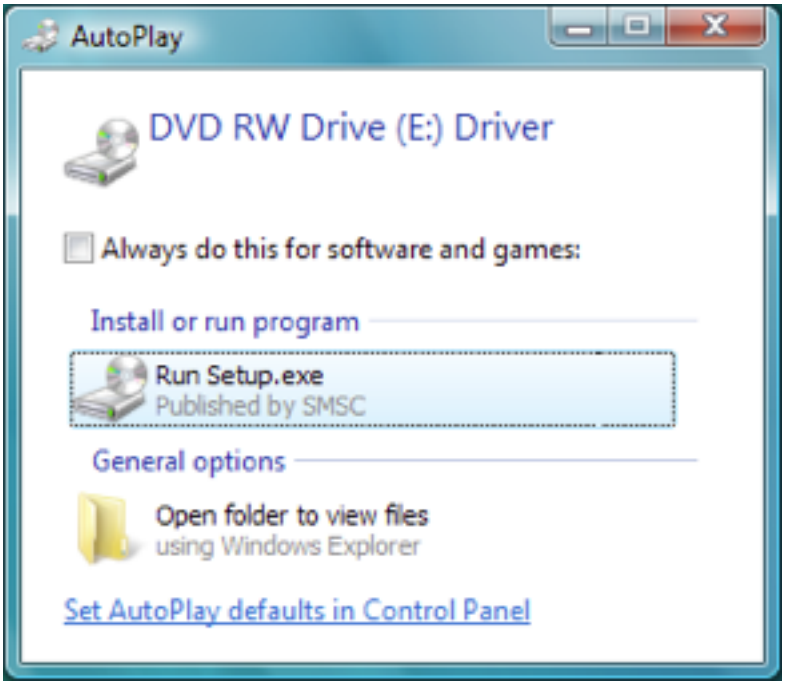
5. Connect the USB 3.0 to DVI Adapter to a computer after the driver installation is completed. For connection details, refer to the chapter of Parts and Connection.
6. When the operating system detects the adapter, the reminder message will appear on the system tray as below.



Note: Click <Yes> to restart or <No> to manually restart later, if a prompting to restart computer message appears.
7. To change the status of display mode, position the mouse anywhere on the Windows desktop, and then right-click to select <Screen Resolution>.

For Windows® Vista users

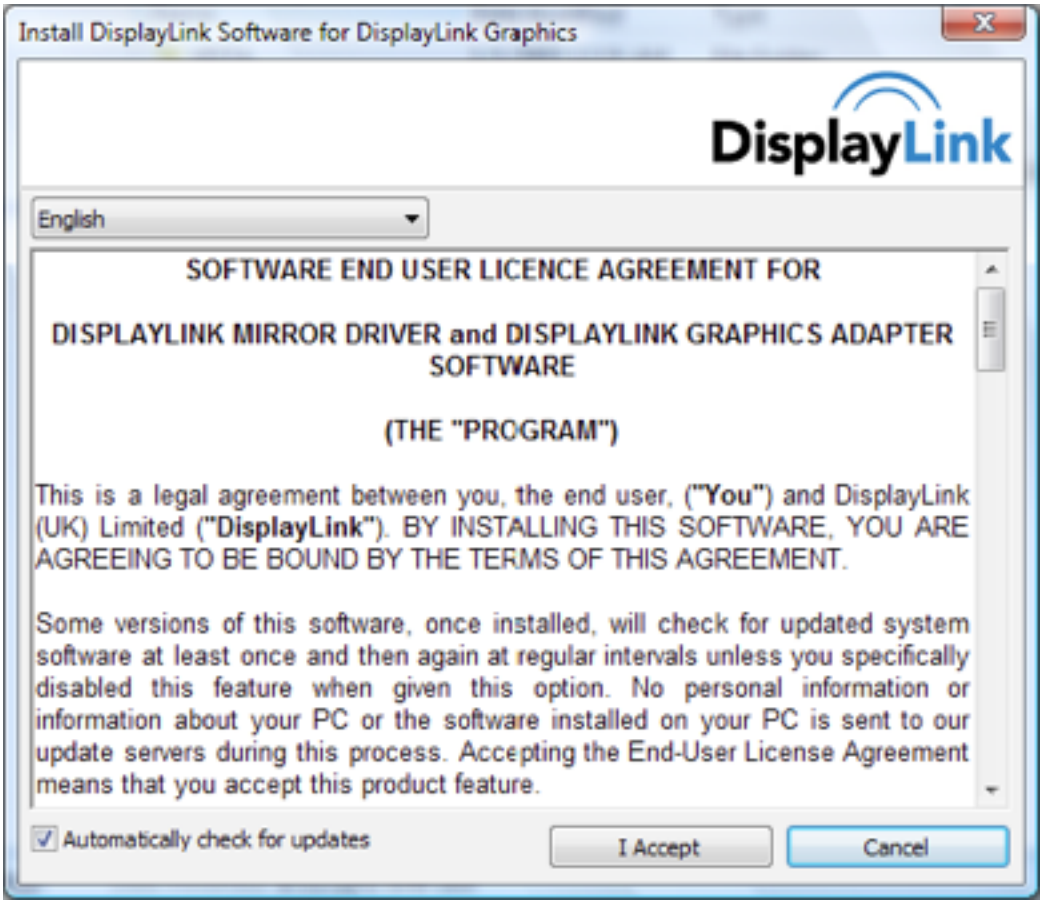
1. Insert the supplied driver CD into a computer's CD/DVDROM.
2. Click <Run Setup.exe> to start the installation.



Note:

- If the AutoPlay does not appear automatically, locate and double-click on the Setup.exe file in the driver folder to launch the setup.
- Enter the administrator password and then click <Allow> to start the installation if a User Account Control dialog box appears.

3. Click <I Accept> for the next step.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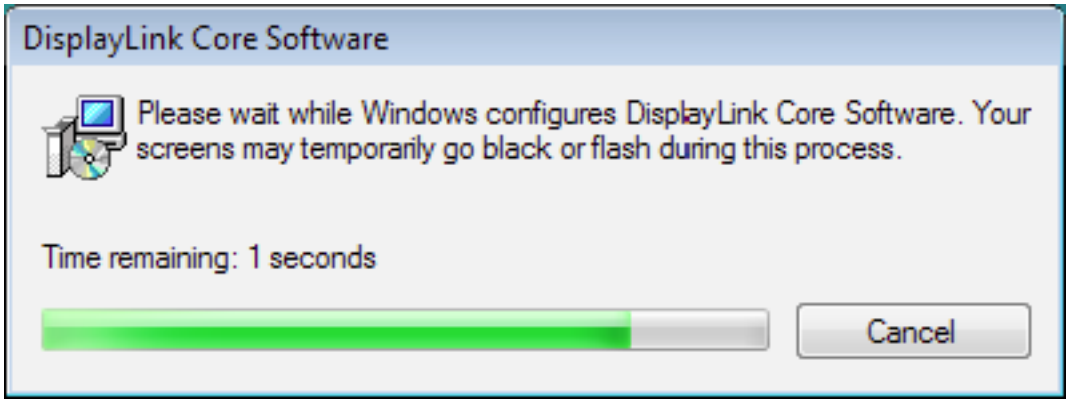
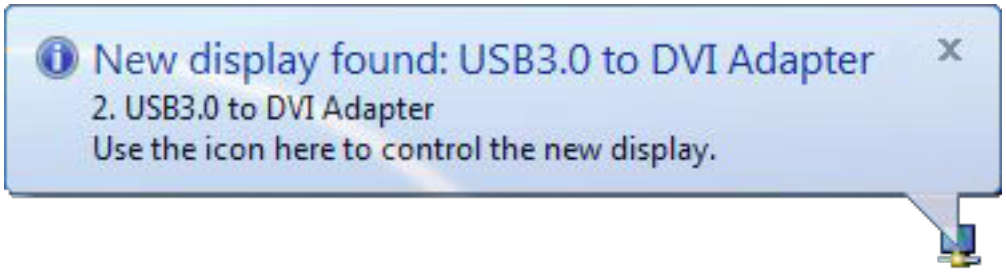
Automatically check for updates
I Accept
Cancel

4. Be patient with the installation procedure, it may take a while.


DisplayLink Core Software
Please wait while Windows configures DisplayLink Core Software. Your screens may temporarily go black or flash during this process.
Time remaining: 1 seconds
Cancel

5. Connect the USB 3.0 to DVI Adapter to a computer after the driver installation is completed. For connection details, refer to the chapter of Parts and Connection.

6. When the operating system detects the adapter, the reminder message will appear in the Windows System Tray as below.



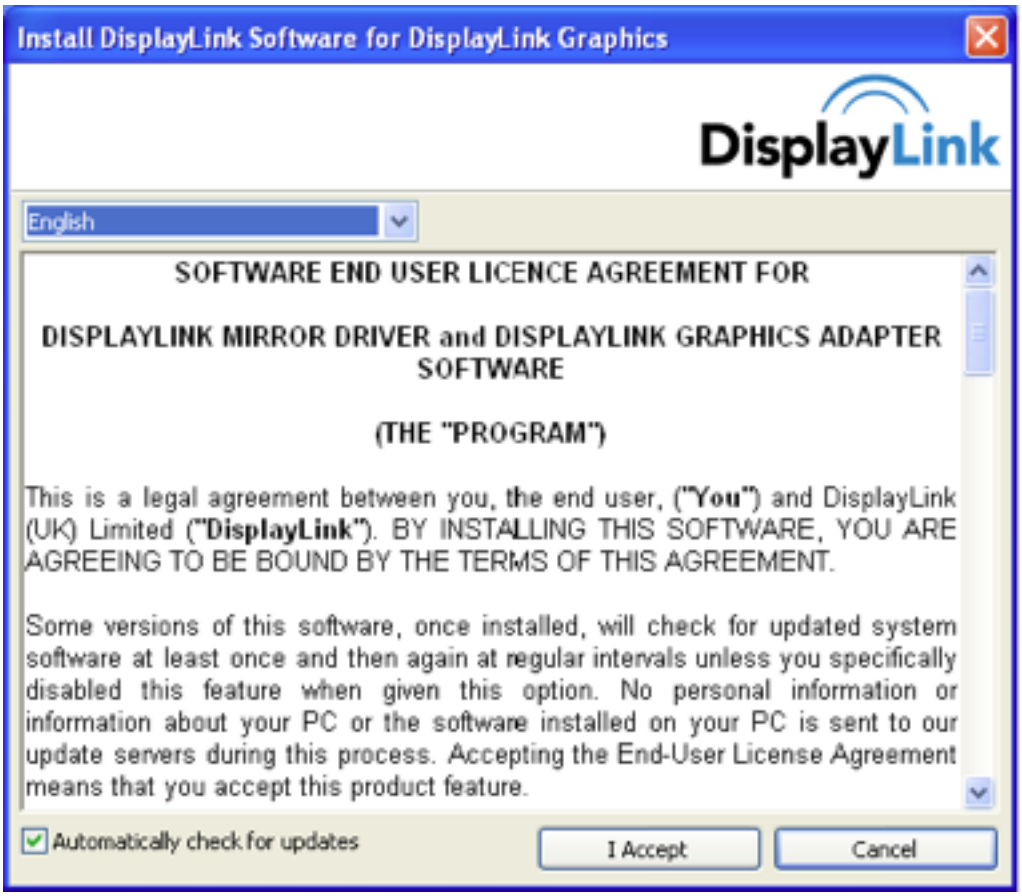
Note: Click <Yes> to restart or <No> to manually restart later, if a prompting to restart computer message appears.

7. To change the status of display mode, position the mouse anywhere on the Windows desktop, and then right-click to select <Personalize>.

8. Click <Display Settings> to enter the configuration page.

For Windows® XP users

1. Insert the supplied driver CD into a computer's CD/DVDROM.
2. Click <I Accept > for the next step.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DisplayLink
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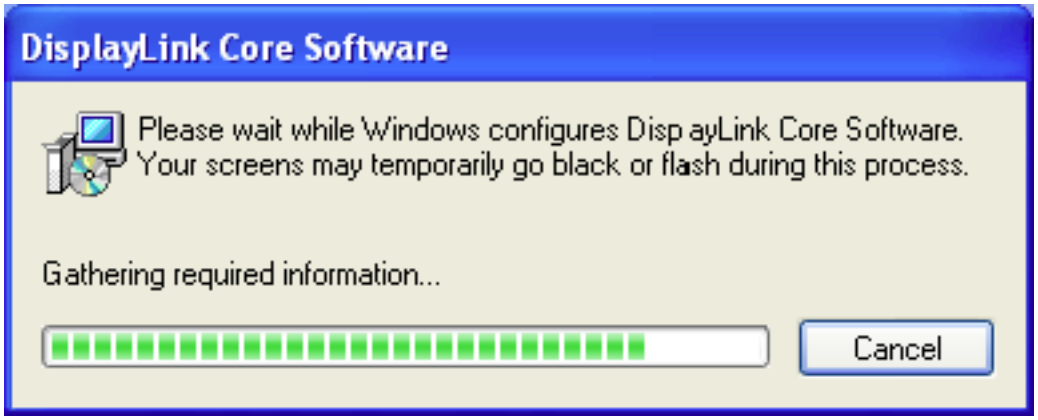
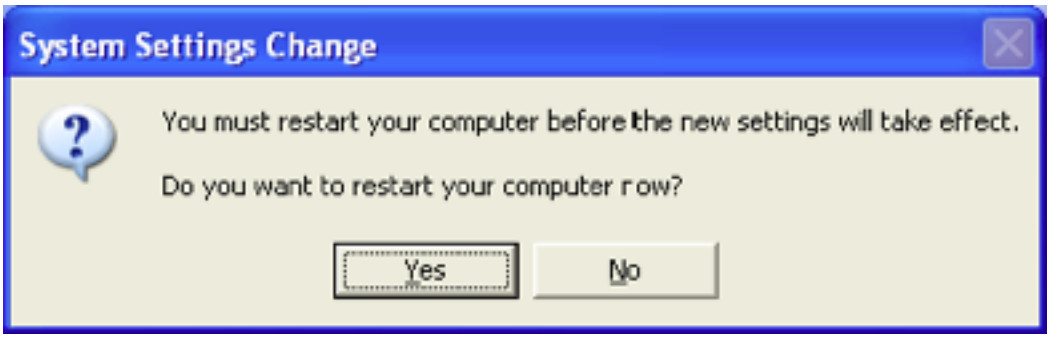
Automatically check for updates
I Accept
Cancel

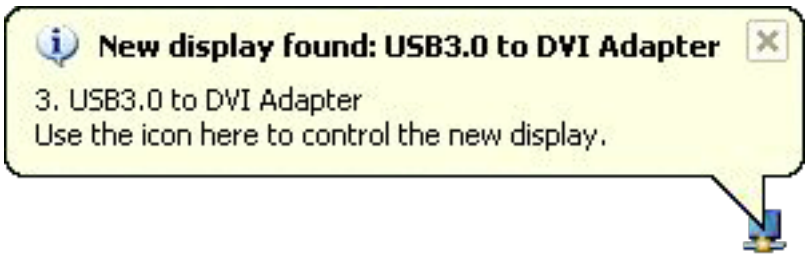
3. Be patient with the installation procedure, it may take a while.


DisplayLink Core Software
Please wait while Windows configures Disp ayLink Core Software.
Your screens may temporarily go black or flash during this process.
Gathering required information...
Cancel

Note: Click <Yes> to restart or <No> to manually restart later, if a prompting to restart computer message appears.

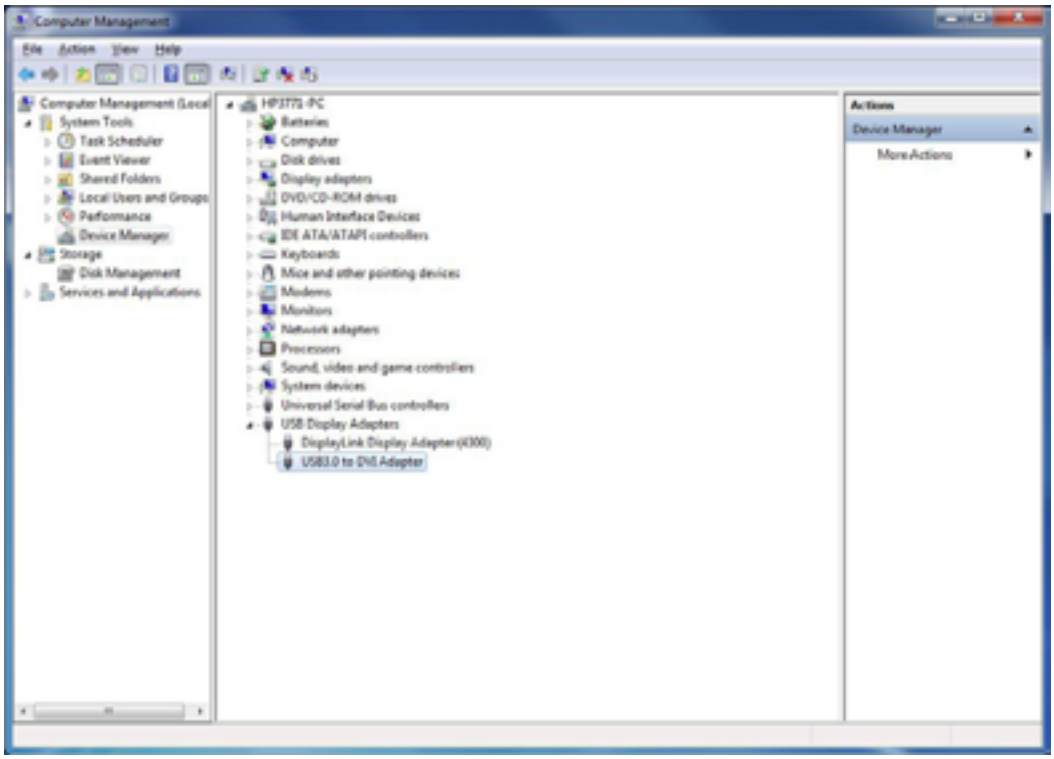

System Settings Change
You must restart your computer before the new settings will take effect.
Do you want to restart your computer now?
Yes
No

4. Connect the USB 3.0 to DVI Adapter to a computer after the driver installation is completed. For connection details, refer to the chapter of Parts and Connection.
5. When the operating system detects the adapter, the reminder message will appear on the system tray as below.



6. To change the status of display mode, position the mouse anywhere on the Windows desktop, and then right-click to select <Properties>.
7. Click <Settings> tab to enter the configuration page.

Verifying the driver
To verify the driver of the adapter, follow the step below to open the Device Manager on Windows operating system.
1. Following the path as below to open the device manager
Windows® 8: My Computer\Computer(right click)\ Properties\Device Manager
Windows® 7: Control Panel\System and Security\ System\Device Manager
Windows® Vista: Control Panel\System Maintenance\ Device Manager
Windows® XP: Control Panel\System\Hardware\Device Manager
2. A string similar to USB.. Adapter device should be listed.



The screen shot above is demonstrated by Windows® 7 and might be varied slightly for each operating system.
Note: If there is a (question) or **(exclamation) mark next to that item,** then the driver is not properly installed. Please delete the item, unplug the
adapter and repeat the installation steps.

Using the adapter

There are several ways to utilize the monitor attached on the adapter. The add-on monitor can be configured to use either “mirror mode”, “extended mode” or be the primary display as described in this section.

Mirror mode: Duplicate the primary display and mirror to the add-on monitor(s).

Extended mode: The Windows Desktop will be spread to the add-on monitor(s).

Primary mode: Assign the add-on monitor to the primary display.

Note that the following screen shots in this section are using Windows® 7 operating system. It may not match your operating system but the definitions of buttons, tabs and menus are the same.

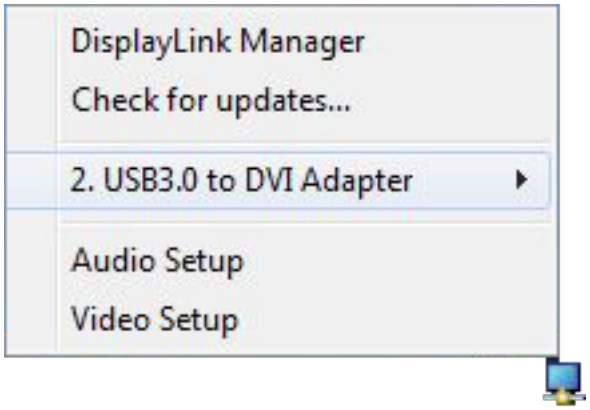
Utility settings

The supplied utility allows you to configure the display mode, screen rotation, screen resolution, and physical arrangement of your monitors.

1. Click < (utility icon) > in the Windows System Tray.

Note: The may be hided in the Windows System Tray. Click < (arrow icon) > to bring up more icons if it happens.

2. Select a preferred option, and then click it using mouse.



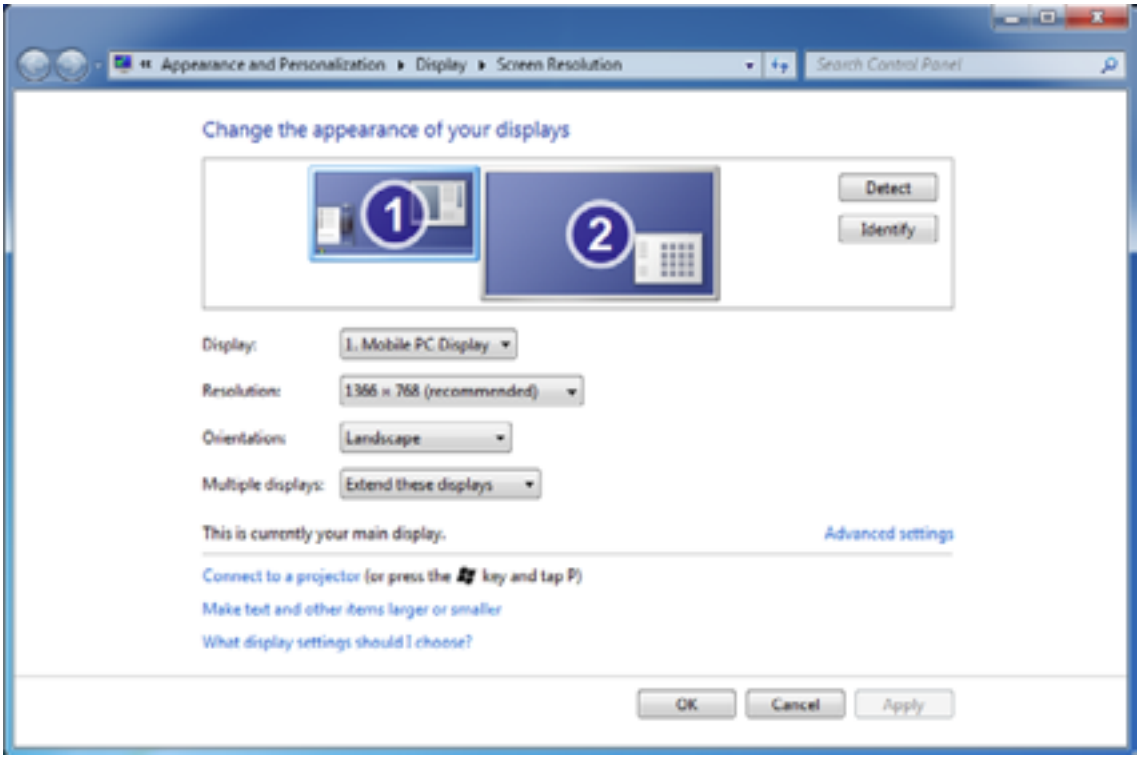
Description of the settings

Options	Description
DisplayLink Manager	Enable the Windows screen resolution page.
Check for Updates	Check the latest driver and download if available
USB 3.0 DVI-I Graphics Adapter	
Screen Resolution	Click to select an available resolution. Note that this function is invalid in mirror mode, as the resolution is defined as the resolution of the primary monitor.
Screen Rotation	Rotate the screen according to the desired orientation
Extend To	Extend the screen according to the desired orientation
Set as Main Monitor	Set this screen to the main screen
Notebook Monitor Off	Switch the add-on monitor to the main display and turn off the screen of the laptop. Note: This function works only when one add-on monitor is connected. This option will also only appear on laptop.
Mirror	Duplicate the primary monitor to the monitor which connects with the adapter
Off	Turn off the monitor
Optimize for video	Optimize the video quality when playing back. Text may appear less clear when enabling

Options	Description
USB 3.0 DVI-I & HDMI Graphics Adapter	
Fit to TV	Adjust the size of Windows Desktop on the TV. Note: This function works only when one add-on monitor is connected. Besides, this option will also work in extended mode. The add-on monitor will change to the extended mode if selecting this option while in mirror mode.
Audo Setup	Enable the Windows audio configuration page. This function works only in specific models.
Video Setup	Enable the Windows screen resolution page.

Windows system configuration

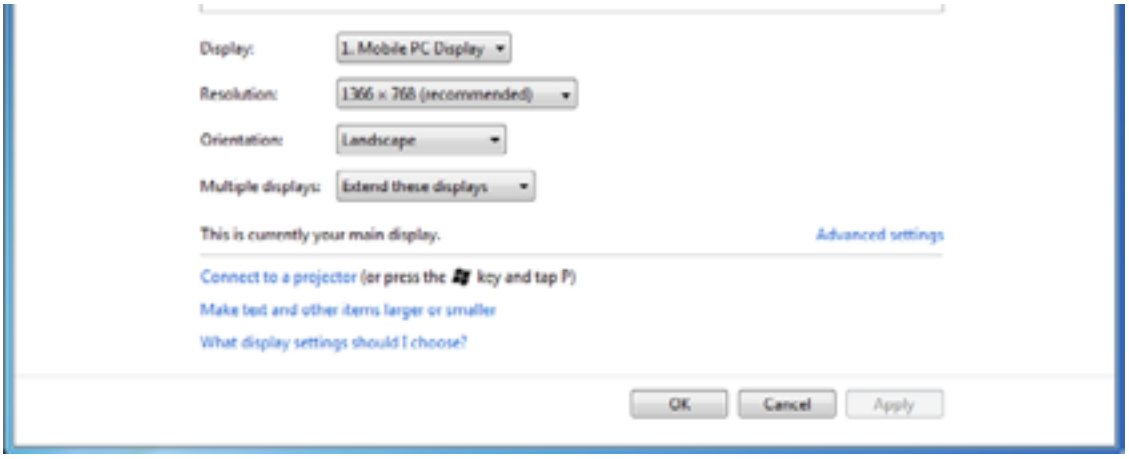
Position the mouse anywhere on your computer desktop, right-click and select <Screen Resolution> on Windows® 7/ Windows® 8, Personalize > Display Settings on Windows® Vista or Properties > Settings on Windows® XP.



Alternatively, click < (utility icon) > in the Windows System Tray, and then select DisplayLink Manager or Video Setup.

Extended mode

1. Refer to the Windows system configuration section to open the configuration page.
2. In the Display drop-down menu, select the option with the string similar to “DisplayLink Graphics Adapter”.



3. Check the Multiple Displays > Extend these displays on Windows® 7/ Windows® 8, Extend the desktop onto this monitor box on Windows® Vista or Extend my Windows desktop onto this monitor box on Windows® XP/ Windows® 2000.

4. Click <OK> to confirm and close the settings screen.
5. Once the setting is completed, simply drag and drop the application icons or the opened windows to the add-on monitor. However, some applications may not support to display on the extended desktop.

Cursor disappeared

If the status remains in the extended mode but the adapter is disconnected, the desktop will still be panned to the add-on monitor. The cursor may not be found on the primary monitor in such a case. If it happens, connect the add-on monitor through the adapter again or keep moving the mouse.

Video playback in extended mode

If the video or DVD playback quality is poor or low performance in the extended mode, please playback it on the primary monitor instead of the add-on monitor.

Mirror mode

1. Refer to the Windows system configuration section to open the configuration page.
2. In the Display drop-down menu, select the option with the string similar to “DisplayLink Graphics Adapter”.
3. Check the Multiple Displays > Duplicate these displays on Windows® 7/ Windows® 8, uncheck the Extend the desktop onto this monitor box on Windows® Vista or Extend my Windows desktop onto this monitor box on Windows® XP/ Windows® 2000.
4. Click <OK> to confirm and close the settings screen.

Be the primary monitor

1. Refer to the Windows system configuration section to open the configuration page.
2. In the Display drop-down menu, select the option with the string similar to “DisplayLink Graphics Adapter”.
3. Check the Make this my main display box on Window® 7/ Windows® 8/ Windows® Vista, or Use this device as the primary monitor box on Windows® XP/ Windows® 2000.

Note: Some PCs and laptops may need to disable the main display (i.e. uncheck the Extend the desktop onto this monitor or Extend my Windows desktop onto this monitor box for the main display) as part of the same settings change.

4. Click <OK> to confirm and close the settings screen.

Windows shortcut

Press < (Windows) > + <P> button to bring up the menu as below, and then select a desired option. This function is available for Windows® 7 only.

Advanced operations

Advanced settings

1. Refer to the Windows system configuration section to open the configuration page.
2. To change the refresh rate or other options, click <Advanced settings>. For more detailed adjustments, refer to the instruction manual of operating system.
3. Click <OK> to confirm and close the settings screen.

Adjust the resolution

Extended monitor

By default, the adapter will configure the settings for the add-on monitor automatically, such as screen resolution, color quality or refresh rate etc. However, these settings can be configured by user as well. The maximum resolution and refresh rate are depending on specifications of the monitors.

Mirror monitor

In mirror mode, both monitors will be configured to the same resolution, which may not be the maximum resolution of the monitors. The resolution of the primary and add-on monitors may be changed to a lower resolution. For example, if the primary monitor does not support the resolution of 1920x1080, then 1920x1080 is not possible to set even the connected adapter supports 1920x1080.

Supported resolution

Before adjusting the resolution, refer to the table below for the supported resolution.

Resolution support, refresh rate and color depth			
640x480	VGA	60 72 75 85	60 72 75 85
800x600	SVGA	56 60 72 75 85	56 60 72 75 85
1024x768	XGA	60 70 75 85	60 70 75 85
1280x720	720p	60	60
1280x768	WXGA+	60 75 85	60 75 85
1280x800	WXGA	60	60
1280x1024	SXGA	60 75 85	60 75 85
1366x768	WXGA+	60	60
1400x1050	SXGA+	60 75 85	60 75 85
1600x1200	UXGA	60	60
1680x1050	WSXGA+	60	60
1920x1080	1080p	60	60
1920x1200	WUXGA	60	60
2048x1152	QXGA	60	60

Note that interlaced modes and reduced blanking modes are not supported.

Using multiple adapters

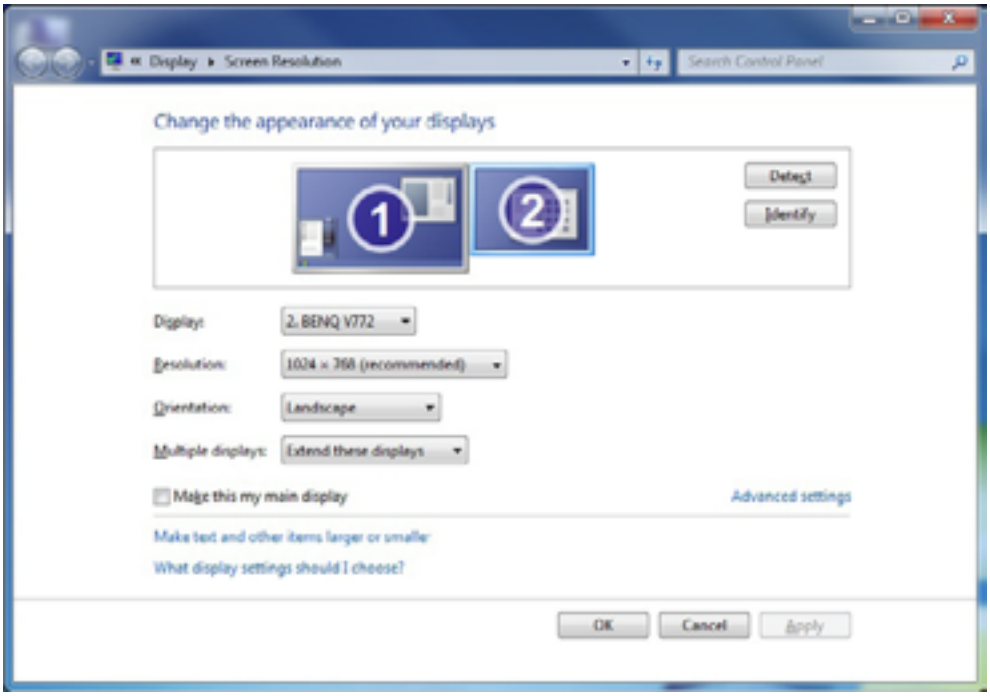
Up to 6 adapters can be connected to one computer simultaneously. To connect multiple adapters, install the drive as described in the Installation section and then connect the adapters to a computer.

Note: Only the first connected adapter can be configured to extended mode and the others will be forced to mirror mode if using a low-end or poor conditional computer.

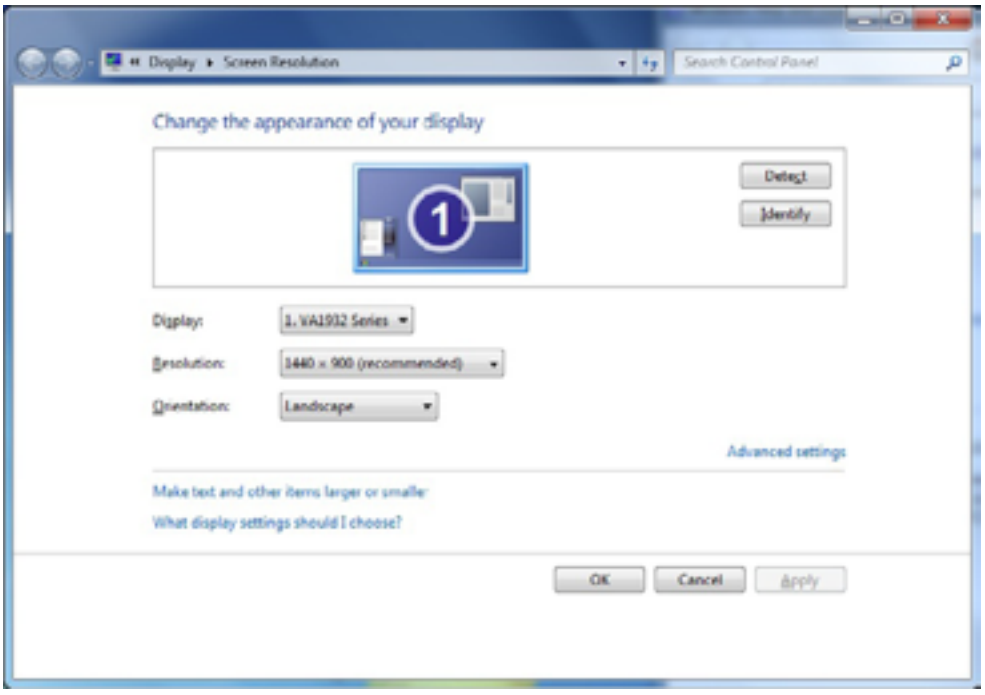
Disconnect the adapter

The add-on monitor goes blank when the operating system goes into standby, hibernate mode or even disconnection. All windows and icons will move to the primary screen. Once the system is activated or reconnected again, the display mode will return to the previous mode before disconnecting. However, some windows or icons may not remove back to the screen of add-on monitor.

Note:
The connected monitor(s) will still remain on the configuration page after disconnecting the DVI connector from a monitor.

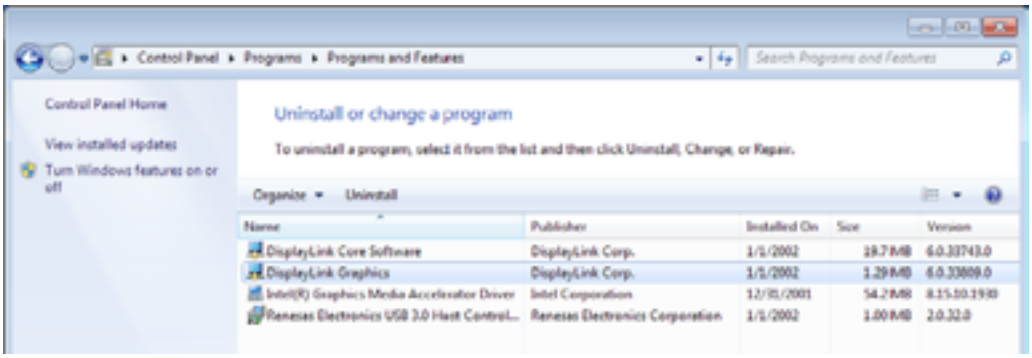


To return the original status on the configuration page, remove the USB cable from USB connector.

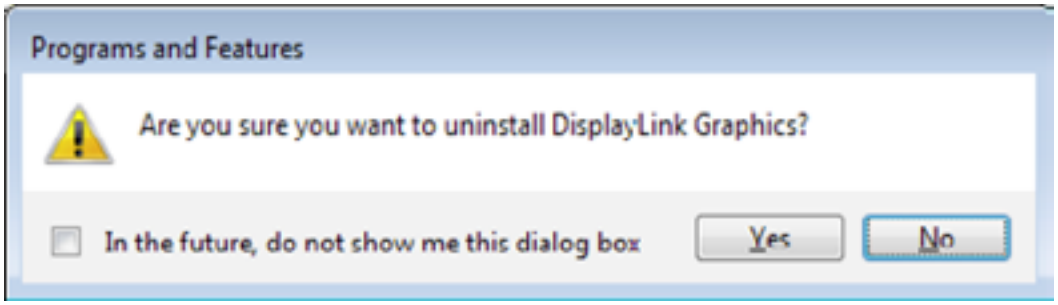


Uninstall the adapter and driver

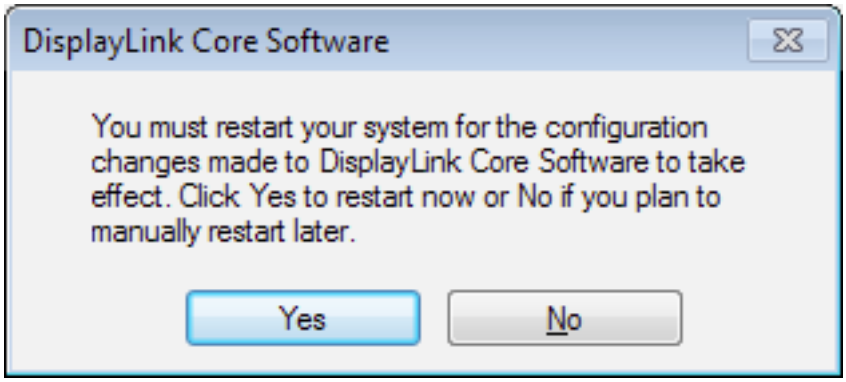
1. Open the Control Panel > Programs > Programs and Features on Windows® 7/ Windows® 8/ Windows® Vista, and Add or Remove Programs on Windows® XP.
2. Select <DisplayLink Graphics> and click <Uninstall or Remove>.



3. Click <Yes> to remove the driver.


Programs and Features
Are you sure you want to uninstall DisplayLink Graphics?
In the future, do not show me this dialog box
Yes
No

4. Click <Yes> to restart your computer and then unplug the adapter now.


DisplayLink Core Software
You must restart your system for the configuration changes made to DisplayLink Core Software to take effect. Click Yes to restart now or No if you plan to manually restart later.
Yes
No

Troubleshooting

The display on the add-on monitor is blank.

- If the monitor power is on (LED lights green in most cases), wait a moment for the monitor to show the video as sometimes it takes time for the add-on monitor to show the video. You can also reboot your system to try again. Also make sure the computer is not in standby or hibernation mode, which will lead the add-on monitor to be blank.
- If the monitor power is in standby (LED lights red in most cases), check the connection. If problem still exists, uninstall the driver, unplug the adapter and reinstall the driver again.

The add-on monitor is flickering.

- This is usually caused by a low refresh rate. To solve this problem, refer to the steps below.
- In mirror mode, increase the refresh rate of the main monitor. This will in turn increase the refresh rate of the add-on monitor.
- In extended mode, increase the refresh rate of the add-on monitor.

When playing a MPEG file by Windows Media Player on the extended monitor, the display becomes abnormal when switching it to full screen mode?

- Upgrade the Windows® XP from SP1 to SP2.

When playing the video in full screen mode, the motion is not smooth.

- Reduce the resolution of the display to 640x480 or 800x600.
- Use the adapter in extended mode.
- Terminate any other CPU intensive applications running on the computer.
- As some media players require DirectX hardware support to correctly operate, try a different media player which requires less DirectX support.
- Drag the media player to the add-on screen and close the player. Restart the player and it should open on the add-on monitor. Now try playing the media file again.
- Try reducing the hardware acceleration level of the primary display (NOT the add-on monitor) to levels 1, 2 or 3 and restarting the media player. The hardware acceleration can be found by right-clicking on your desktop and click Properties > Settings > Advanced > Troubleshoot. Some players use this setting even when playing on a different display.
- The video playback may be unusual when the addon monitor is mirroring the primary display and there is another extended screen connected to the computer. The extended screen must be disabled before the content will be correctly cloned to the add-on monitor.

In extended mode, the add-on monitor appears to have a black border around the desktop.

- This happens when the resolution used by the addon monitor is larger than the resolution used by the primary monitor. To solve this problem, configure the add-on monitor to use the same resolution as the primary monitor.

No screen when playing back the protected contents. (varies by model)

- Some protected videos may not be played back when connecting to a DVI monitor.

Full screen menus may corrupt or lose the level of detail.

- It may appear when the resource of computer does not enough to render the screen in full quality. It may also occur when the Optimize for video is enabled through the DisplayLink GUI.
- Disable the Optimize for video, or turn off unnecessary programs.
- Set the power plan to High performance when using laptop.

Hardware acceleration may not available to applications.

- Check the table below for more supported information.

Interface	Windows XP	Windows Vista/ Windows 7 / Windows 8
DX10	No	Yes, if supported by the primary graphic card.
DX9	No	Yes, but full screen mode is not available. It displays only in windowed mode.
DxVA	No	Yes, if supported by the primary graphic card.
Direct 3D	No	Yes but not available when the docking station is set as primary display
DirectDraw	Yes	Yes
OpenGL	No	Yes, but full screen mode is not available. It displays only in windowed mode.

Specifications
Host Interface USB 3.0
Video Interface DVI
Connectors Video output: DVI HDDE 30pin female connector
Host upstream link: USB 3.0 Micro B type connector
Connectivity Up to 6 adapters on a computer
RAM 512Mb DDR2 SDRAM
Power Mode Bus-powered
Power Consumption
Operating Power : 340 mA
Operating system Support
Windows® XP Home or Professional SP2 or SP3, Windows® Vista SP1 or SP2 (32-bit or 64-bit), Windows® 7 (32-bit or 64-bit), and Windows® 8
Supported Modes
Extended Desktop (Default), Mirrored Desktop, Primary Display
Housing ABS Plastic
Dimensions 84.5 (L) x 55.5 (W) x18 (H) mm
Operating temperature 10°C~40°C
Storage temperature -20°C~70°C
Relative Humidity < 85% non-condensing

Resolutions, Refresh rate and color depth

Resolution support, refresh rate and color depth			
640x480	VGA	60 72 75 85	60 72 75 85
800x600	SVGA	56 60 72 75 85	56 60 72 75 85
1024x768	XGA	60 70 75 85	60 70 75 85
1280x720	720p	60	60
1280x768	WXGA+	60 75 85	60 75 85
1280x800	WXGA	60	60
1280x1024	SXGA	60 75 85	60 75 85
1366x768	WXGA+	60	60
1400x1050	SXGA+	60 75 85	60 75 85
1600x1200	UXGA	60	60
1680x1050	WSXGA+	60	60
1920x1080	1080p	60	60
1920x1200	WUXGA	60	60
2048x1152	QXGA	60	60

USB Cable Separated from the body
Type: USB 3.0 Type A (Male) to Micro USB 3.0 (Female)
***Specifications are subject to change without notice.**

Regulatory compliance

FCC conditions

This equipment has been tested and found to comply with Part 15 Class B of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference
(2) This device must accept any interference received and include interference that may cause undesired operation.

CE

This equipment is in compliance with the requirements of the following regulations: EN 55 022: CLASS B

WEEE information

For EU (European Union) member users: According to the WEEE (Waste electrical and electronic equipment) Directive, do not dispose of this product as household waste or commercial waste. Waste electrical and electronic equipment should be appropriately collected and recycled as required by practices established for your country. For information on recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.